



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of:

Michael J. Duigou, et al.

Serial No. 09/656,588

Filed: September 7, 2000

For: Method and Apparatus

for Proximity Discovery

of Services

Group Art Unit: 2142

Examiner: Blair, Douglas B

Atty. Dkt. No.: 5181-72300

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August 2, 2006 Date

Signature

APPEAL BRIEF

Mail Stop Appeal Brief - Patents Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal filed May 19, 2006 and Notice of Panel Decision mailed July 3, 2006, Appellants present this Appeal Brief. This Appeal Brief is timely filed within the one month period from the mailing date of the Notice of Panel Decision. Accordingly, no extension of time fee should be due. Appellants respectfully request that the Board of Patent Appeals and Interferences consider this appeal.

I. REAL PARTY IN INTEREST

As evidenced by the assignment recorded at Reel/Frame 011068/0768, the subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and now having its principal place of business at 4150 Network Circle, Santa Clara, CA 95054.

II. RELATED APPEALS AND INTERFERENCES

No other appeals, interferences or judicial proceedings are known which would be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-54 are pending and stand finally rejected. The rejection of claims 1-54 is being appealed, a copy of which, as currently pending, is included in the Claims Appendix herein below.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been submitted subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed toward a method for accessing a proximity service including a client device, such as client device 2150 in one example, forming a direct point-to-point communication link with a service device, such as service device 2170 for example, and the client device directly requesting, over the direct point-to-point communication link, to the service device a document (e.g. document 2178) that describes an interface to access a service provided by the service device. As described in Appellants' specification, such as at page 13, lines 18 - 24 for example, services on some devices, such as proximity-based services, may transmit service advertisements or other interface documents upon request. (See e.g., FIG. 6, 7, 44; page 13, line 18 - page 14, line 12; page 119, line 25 - page 120, line 6; 121, line 28 - page 122, line 7).

For instance, a service may transmit a service advertisement in response to a connection request or a proximity service discovery message from a client (See e.g., FIG. 44, 45; page 13, line 18 - page 14, line 12; page 119, 11 - 23; page 122, line 21 - page 123, line 2). The client may send a proximity service discovery message to the service device in some embodiments (See e.g., page 15, lines 2 - 10). In other embodiments, a connection request may service as the request for the document (See e.g., page 13, lines 6 - 14; page 14, lines 7 - 10; page 119, lines 11-23).

The direct point-to-point communication link may be accomplished using various communications technologies, according to various embodiments. For example, the client and server devices may communicate in an IrDA point-to-point communication environment in one embodiment. (See e.g., FIG. 44; page 120, lines 8 – 17; page 123, line 28 – page 122, line 7). In other embodiments, the point-to-point communication link may utilize other wireless or wired communication technologies. (See e.g., page 13, lines 20 - 24; page 35, line 28 - page 36, line 3; page 119, line 27 - page 120, line 6).

In some embodiments, a service discovery mechanism may allow clients to discover services without using separate, widely available rendezvous points (See e.g.,

page 13, line 26 – page 14, line 2). For example, a service device providing one or more services may support a proximity communication link and a client device may form a proximity communication link with the service device and directly request from the service device a document that describes an interface to access a service provided by the service device. (See e.g., FIG. 44; page 14, lines 4 – 12; page 14, lines 24 – 30; page 120, lines 8 - 17). For instance, a printer device with a printer service that is available on a proximity bases may transmit its service advertisement to provide an XML schema for connecting to an running the printing service on the printer device (See e.g., page 13, lines 8 – 16).

The method of claim 1 also includes the client device receiving, also over the direct point-to-point communication link, the document directly from the service device. For example, a service interface document may be provided in a response message from the service device (See e.g., FIG. 44, 45, page 14, lines 14 - 22, page 119, lines 15 - 21).

The document may include information describing how to access the service and the client device uses the information from the document to access the service. For instance, in some embodiments, the document may include a service advertisement for the service that may include a schema, such as an XML schema for example, specifying an interface to at least a portion of the service provided by the service device. (See e.g., Fig. 44 and 45; page 14, lines 14 - 22; page 119, lines 9 - 19; page 122, lines 2 - 7). Additionally, in some embodiments, the client may use a URI and/or protocol specified in the document, or specified in a service advertisement in the document, to send and receive messages to the service device. (See e.g., page 32, lines 6 - 18; page 34, line 27 - page 35, line 14; page 36, lines 22 - page 37, line 4; page 38, line 25 - page 39, lines 2; page 45, line 27 - page 46, line 8).

Independent claim 19 is directed toward a system including a service device and a client device. The service device is configured to support a direct point-to-point communication link and to provide a service. The client device is configured to form the direct point-to-point communication link with the service device and to directly request

from the service device a document that describes an interface to access the service. As described above regarding claim 1, services on some devices may transmit service advertisements or other interface documents upon request (See e.g., FIG. 6, 7, 44; page 13, line 18 - page 14, line 12; page 119, line 25 - page 120, line 6; 121, line 28 - page 122, line 7). The client may send a proximity service discovery message to the service device in some embodiments (See e.g., page 15, lines 2 - 10). In other embodiments, a connection request may service as the request for the document (See e.g., page 13, lines 6 - 14; page 14, lines 7 - 10; page 119, lines 11-23).

The service device may also be configured to provide the document directly to the client device over the direct point-to-point communication link. For instance, a service may transmit a service advertisement in response to a connection request or a proximity service discovery message from a client (See e.g., FIG. 44, 45; page 13, line 18 – page 14, line 12; page 119, 11 – 23; page 122, line 21 – page 123, line 2).

The client device is also configured to use the information from the document to access the service. For example, the document may include a service advertisement for the service that may include a schema, such as an XML schema for example, specifying an interface to at least a portion of the service provided by the service device. (See e.g., Fig. 44 and 45; page 14, lines 14 - 22; page 119, lines 9 - 19; page 122, lines 2-7). Additionally, in some embodiments, the client may use a URI and/or protocol specified in the document, or specified in a service advertisement in the document, to send and receive messages to the service device. (See e.g., page 32, lines 6 - 18; page 34, line 27 - 22 page 35, line 14; page 36, lines 22 - 22 page 37, line 4; page 38, line 25 - 22 page 39, lines 2; page 45, line 27 - 22 page 46, line 8).

Independent claim 37 is directed toward a client device including a port, such as proximity port 2156 for example, and an interface, such as client interface 2154 for example. (See, e.g., FIG 44, 45, page 121, line 28 – page 122, line 7; page 122, line 21 – page 123, line 2). The port may be configured to form a direct point-to-point communication link, such as an IrDA link in one embodiment, with a service device and

the interface may be configured to directly request over the point-to-point communication link a document that describes an interface to access a service. (See, e.g., FIG 44, 45, page 121, line 28 – page 122, line 8; page 122, line 21 – page 123, line 2).

For instance, a service may transmit a service advertisement in response to a connection request or a proximity service discovery message from a client (*See e.g.*, FIG. 44, 45; page 13, line 18 – page 14, line 12; page 119, 11 – 23; page 122, line 21 – page 123, line 2). The interface may be configured to receive the document directly from the service over the point-to-point communication link and to use the information from the document to access the service. (See, e.g. FIG. 24, 44, 45; page 122, lines 5 – 8; page 122, line 21 – page 123, line 2). For example, the document may include a service advertisement for the service that may include a schema, such as an XML schema for example, specifying an interface to at least a portion of the service provided by the service device. (*See e.g.*, Fig. 44 and 45; page 14, lines 14 – 22; page 119, lines 9 – 19; page 122, lines 2- 7). Additionally, in some embodiments, the client may use a URI and/or protocol specified in the document, or specified in a service advertisement in the document, to send and receive messages to the service device. (*See e.g.*, page 32, lines 6 – 18; page 34, line 27 – page 35, line 14; page 36, lines 22 – page 37, line 4; page 38, line 25 – page 39, lines 2; page 45, line 27 – page 46, line 8).

Independent claim 38 is directed toward a service device including a port, such as proximity port 2172 for example, an interface, such as service interface 2174 for example, and a service unit, such as service 2176 for example. The port may be configured to form a direct point-to-point communication link with a client device. The direct point-to-point communication link may be accomplished using various communications technologies, according to various embodiments. For example, the client and server devices may communicate in an IrDA point-to-point communication environment in one embodiment. (See e.g., FIG. 44; page 120, lines 8 – 17; page 123, line 28 – page 122, line 7). In other embodiments, the point-to-point communication link may utilize other wireless or wired communication technologies. (See e.g., page 13, lines 20 - 24; page 35, line 28 - page 36, line 3; page 119, line 27 - page 120, line 6).

The interface may be configured to receive over the point-to-point communication link a request from a client for a document that describes an interface to access the service. For instance, a service may transmit a service advertisement in response to a connection request or a proximity service discovery message from a client (See e.g., FIG. 44, 45; page 13, line 18 - page 14, line 12; page 119, 11 - 23; page 122, line 21 - page 123, line 2). The client may send a proximity service discovery message to the service device in some embodiments (See e.g., page 15, lines 2 - 10). In other embodiments, a connection request may service as the request for the document (See e.g., page 13, lines 6 - 14; page 14, lines 7 - 10; page 119, lines 11-23).

The interface may also configured to provide the document directly from the client over the point-to-point communication link. For instance, a printer device with a printer service that is available on a proximity bases may transmit its service advertisement to provide an XML schema for connecting to an running the printing service on the printer device (See e.g., FIG. 4; page 13, lines 8 - 16; page 14, lines 4 - 12; page 14, lines 24 - 30; page 120, lines 8 - 17).

The service unit may be configured to be accessed by the client according to information specified in the document. For instance, in some embodiments, the document may include a service advertisement for the service that may include a schema, such as an XML schema for example, specifying an interface to at least a portion of the service provided by the service device. (See e.g., Fig. 44 and 45; page 14, lines 14 - 22; page 119, lines 9 - 19; page 122, lines 2 - 7). Additionally, in some embodiments, the client may use a URI and/or protocol specified in the document, or specified in a service advertisement in the document, to send and receive messages to the service device. (See e.g., page 32, lines 6 - 18; page 34, line 27 -page 35, line 14; page 36, lines 22 -page 37, line 4; page 38, line 25 -page 39, lines 2; page 45, line 27 -page 46, line 8).

Independent claim 39 is directed toward a tangible, computer-accessible medium including program instructions that are computer-executable on a client device. The

program instructions are computer-executable to implement forming a direct point-to-point communication link with a service device and directly requesting, over the direct point-to-point communication link, to the service device a document that describes an interface to access a service provided by the service device. (See, e.g., page 160, lines 19 – 28; page 166, line 30 – page 167, line 5). For instance, a service may transmit a service advertisement in response to a connection request or a proximity service discovery message from a client (See e.g., FIG. 44, 45; page 13, line 18 – page 14, line 12; page 119, 11 – 23; page 122, line 21 – page 123, line 2). The client may send a proximity service discovery message to the service device in some embodiments (See e.g., page 15, lines 2 – 10). In other embodiments, a connection request may service as the request for the document (See e.g., page 13, lines 6 – 14; page 14, lines 7 – 10; page 119, lines 11-23).

The program instructions are also executable to implement receiving, over the direct point-to-point communication link, the document, which includes information describing how to access the service, directly from the service device and using the information from the document to access the service. The direct point-to-point communication link may be accomplished using various communications technologies, according to various embodiments. For example, the client and server devices may communicate in an IrDA point-to-point communication environment in one embodiment. (See e.g., FIG. 44; page 120, lines 8 – 17; page 123, line 28 – page 122, line 7). In other embodiments, the point-to-point communication link may utilize other wireless or wired communication technologies. (See e.g., page 13, lines 20 – 24; page 35, line 28 – page 36, line 3; page 119, line 27 – page 120, line 6). A service interface document may be provided in a response message from the service device for example (See e.g., FIG. 44, 45, page 14, lines 14 – 22, page 119, lines 15 – 21).

The document may include information describing how to access the service and the client device uses the information from the document to access the service. For instance, in some embodiments, the document may include a service advertisement for the service that may include a schema, such as an XML schema for example, specifying

an interface to at least a portion of the service provided by the service device. (See e.g., Fig. 44 and 45; page 14, lines 14 - 22; page 119, lines 9 - 19; page 122, lines 2-7). Additionally, in some embodiments, the client may use a URI and/or protocol specified in the document, or specified in a service advertisement in the document, to send and receive messages to the service device. (See e.g., page 32, lines 6 - 18; page 34, line 27 - 27 page 35, line 14; page 36, lines 27 - 27 page 37, line 4; page 38, line 27 - 27 page 46, line 8).

The summary above describes various examples and embodiments of the claimed subject matter; however, the claims are not necessarily limited to any of these examples and embodiments. The claims should be interpreted based on the wording of the respective claims.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- 1. Claims 1-9, 11-15, 19-27, 29-33, 37-47 and 49-51 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodes ("Composable Ad Hoc Location-Based Services for Heterogeneous mobile clients") in view of Hild et al. (U.S. Patent 6,532,368) (hereinafter "Hild").
- 2. Claims 10, 28, and 48 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodes in view of Hild and in further view of Schuster (U.S. Patent 6,795,429).
- 3. Claims 16-18, 34-36 and 52-54 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodes in view of Hild and further in view of Bell (U.S. Patent 6,405,027).

VII. ARGUMENT

First Ground of Rejection

Claims 1-9, 11-15, 19-27, 29-33, 37-47 and 49-51 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodes ("Composable Ad Hoc Location-Based Services for Heterogeneous mobile clients") in view of Hild et al. (U.S. Patent 6,532,368) (hereinafter "Hild"). Appellants traverse this rejection for at least the following reasons. Different groups of claims are addressed under their respective subheadings.

Claims 1, 4, 5, 6, 9, 11, 19, 22, 23, 24, 27 and 29:

Regarding claim 1, Hodes in view of Hild clearly fails to teach or suggest a client device directly requesting to the service device a document that describes an interface to access a service provided by the service device. The Examiner cites section 3.3 of Hodes. However, the Examiner's reliance on Hodes is misplaced. Hodes teaches a system that allows users with mobile clients to discover, access and control devices. Hodes' system does not involve a client directly requesting to a service device a document describing an interface to access a service provided by the service device. Instead, Hodes teaches the use of service interaction proxies (SIPs) that "run at domain-specific granularities and aggregate a group of services with a single set of advertisements" (Hodes, section 3.1, paragraph 2). Hence, instead of clients requesting interface documents directly from service devices, Hodes specifically teaches that SIPs aggregate service information for multiple service devices, such as all the controllable lights in a room (see, Hodes, section 2.2.1).

Hodes' service interaction proxy (SIP) device cannot be considered the service device of Appellants' claims because Hodes' SIP is not a service device from which a document is requested that describes an interface to access a service <u>provided by the service device</u>. In other words, Hodes does not describe a client directly requesting a

document describing an interface for accessing a service provided by a SIP, which would be required for the Examiner's interpretation to be correct. Instead, as noted above, clients in Hodes' system receive aggregated service advertisements from SIP devices that include interface descriptions for accessing and controlling services that are provided by devices other than the SIP device (such as controllable light switches). Thus, by requiring the use of a proxy SIP, Hodes actually teaches away from a client directly requesting to the service device a document that describes an interface to access the service provided by the service device.

Additionally, Hodes in view of Hild fails to teach or suggest the client device receiving the document directly from the service device, wherein the document comprises information describing how to access the service provided by the service. The Examiner again relies on Hodes, citing section 3.7.2 where Hodes describes his Interface Specification Language (ISL). However, Hodes fails to describe a client device receiving an ISL directly from a service device. Instead, as described above, Hodes teaches the use of SIPs that aggregate and distribute service information for multiple controllable objects. Thus, a client in Hodes' system would not receive a service information document directly from the service device. Instead, a client in Hodes' system would request and receive an ISL from a local SIP device, which is not the device that provides the service.

The Examiner responds, in the Response to Arguments, by asserting, "the claim language merely states that the client requests a service directly from the service device" and that "[t]here is no limitation which states that the service is on the service device." However, claim 1 recites, in part, "the client device directly requesting to the service device a document that describes an interface to access a service provided by the service device". Thus, in contrast to the Examiner's statement, there is a specific limitation that the service is provided by the service device. The Examiner also states, "[t]he SIP reads on the service device because it is in fact a device that provides services" and "[t]he SIP provides interface specifications to the client which are considered document[s] describing an interface." However, as discussed above, Hodes' clients do

not request from the SIP a document that describes an interface to access a service provided by the SIP, as would be required for the Examiner's interpretation to be correct. Additionally, the interface specifications provided by Hodes' SIP do not describe interfaces to access a service provided by the service device from which the interface specifications were received, as required by Appellants' claim. Thus, Hodes' SIP cannot be considered the service device of Appellants' claim.

Furthermore, Hodes in view of Hild clearly fails to teach or suggest the client device forming a direct point-to-point communication link with the service device. The Examiner admits that Hodes fails to teach a method for accessing a service using a direct point-to-point link and relies upon Hild, citing column 8, lines 9-20. However, the cited portion of Hild merely describes the various types of network topologies with which Hild's system is compatible. Moreover, the cited passage describes that Hild's system is "independent of the network topology and may be used on any kind of network topology allowing broadcast" (Hild, column 8, lines 15-18). Additionally, as described below, Hild teaches a system of service discovery including broadcasting service advertisements. The brief mention of a point-to-point connection as part of a possible network topology in Hild does not teach or suggest a client actually forming a direct point-to-point communication link with a service device or the client using such a direct point-to-point link for requesting and receiving a document describing an interface to access a service provided by the service device.

As for actual device connections, Hild teaches a system in which all service devices periodically broadcast information regarding services that each particular device is aware of, regardless of whether those services are provided by the sending device or other devices of which the sending device is aware. Hild specifically teaches that each device includes services information provided by other devices as well as its own when broadcasting service announcements. Hild's system includes periodic broadcasts and Hild does not describe anything about a client device directly requesting a document describing an interface to access a service. Moreover, Hild does not teach anything about a client requesting anything. The Examiner has not cited any portion of Hild that

mentions anything about a client device sending any sort of request. Instead, every device in Hild's system listens for a certain amount of time and if, by that time, it has not received a service announcement that includes its own service information it will send out a service announcement including its own service information as well as information regarding all other services of which it is aware (Hild, column 4, line 56-column 5, line 12; column 8, line 65 – column 9, line 12).

In the Response to Arguments, the Examiner states, "Hild shows that a point-to-point connection is an obvious way to access a wireless system." The Examiner has misunderstood Appellants argument. Appellants' have not made any argument regarding the general obviousness of using a point-to-point connection to access a wireless system in general. As stated above, Appellants hold that the Examiner's combination of Hodes in view of Hild does not teach or suggest the specific limitations of Appellants' claim. For example, as noted above, neither Hodes nor Hild, whether taken singly or in combination, teach or suggest a client device forming a direct point-to-point communication link with a service device and directly requesting to the service device a document that describes an interface to access a service provided by the service device. As explained above, Hild mentions point-to-point communications in two places, both in a very general manner. At column 2, lines 26-31, Hild states:

Even household devices, such as CD players, televisions and toasters, could identify and adapt to individual preferences and tastes using PAN technology. The PAN networks are usually point to point where the human body serves as a broadcast communications medium.

This reference by Hild to point-to-point communication bears absolutely no relevance to either Hodes or to Appellants' claim. The other reference to point-to-point communications by Hild states: "The present scheme can be used in local networks with point-to-point and/or point-to-multi-point connections" (Hild, column 8, lines 9-11). Thus, as Appellants noted above, Hild fails to teach or suggest anything specific about a client forming a direct point-to-point communication link with a service device and directly requesting to the service device a document that describes an interface to access a service provided by the service device. The extremely general statements by Hild

regarding point-to-point communications, even when combined with Hodes, do not teach or suggest the specific limitations of Appellants' claims, as discussed below in more detail.

Even when combined as suggested by the Examiner, Hodes in view of Hild, fails to teach or suggest a client device directly requesting to a service device a document that describes an interface to access a service provided by the service device; and the client device receiving the document directly from the service device, wherein the document includes information describing how to access a service provided by the service device. Instead, as noted above, Hodes teaches that a client will access a SIP device to request an interface document describing how to access services provided by other controllable objects. Hild teaches that devices periodically broadcast their service information as well as service information regarding other services provided by other devices. Thus, even when combined as suggested by the Examiner, Hodes in view of Hild does not teach or suggest a client device directly requesting to a service device a document that describes an interface to access a service provided by the service device; and the client device receiving the document directly from the service device, wherein the document includes information describing how to access the service.

In fact, both references <u>teach away</u> from a client device forming a direct point-to-point communication link with a service device. As discussed above, Hodes requires the use of an SIP proxy, as opposed to a direct point-to-point communication link. And the devices in Hild listen to broadcast communications as opposed to making requests over a direct point-to-point communication link.

In the Response to Arguments the Examiner states, "[t]he use of a point-to-point connection to access a wireless device is not a novel concept." As noted above, Appellants have never made any argument regarding the novelty of simply using a point-to-point connection to access a wireless device. Instead, Appellants are arguing that the teachings of Hodes and Hild, whether taken singly or in combination, do not teach or suggest the specific limitations of Appellants' claim 1. The Examiner appears to be

attempting to reject Appellants claim in view of his general contention that "use of a point-to-point connection to access a wireless device is not a novel concept", which is clearly improper. The Examiner has failed to cite any prior art that teaches or suggest the specific limitations as recited in Appellants' claim.

Furthermore, the Examiner has failed to provide a proper motivation for modifying Hodes' system to incorporate the Examiner's selected teachings from Hild. The Examiner merely states that it would have been obvious to combine "the teachings of Hode[s] regarding the discovery of interfaces for accessing a service with the teachings of Hild regarding accessing a service via a direct point-to-point link because a point-topoint link would be a common way of accessing a service interaction proxy such as the one taught by Hode[s]." However, merely because a direct point-to-point links may be "a common way of accessing" devices in some contexts, does not provide any motivation to modify the specific system of Hodes away from the use of SIPs providing aggregated service information to clients. Merely stating that individual aspects of a claimed invention are well known does not render the combination well known without some objective reason to combine the individual teachings. Ex parte Levengood, 28 USPQ2d 1300. The Examiner's statement that a point-to-point link would be a common way of accessing Hodes' SIP device does not change the fact that in Hodes a client does not request a document from a SIP device that describes an interface to access a service provided by the SIP, as would be required for the Examiner's line of reasoning to be correct.

Additionally, Hodes specifically teaches that SIPs provide aggregated service information for other service devices instead of service information being directly requested from service devices themselves. Modifying Hodes so that clients directly request service information from the service devices themselves via a direct point-to-point link with the service device would clearly change the principle of operation of Hodes' system. As noted at M.P.E.P. § 2143.02, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render

the claims *prima facie* obvious." Such is the case here. The Examiner proposes changing one of the basic principles of Hodes system of using a proxy instead of a direct point-to-point communication link to the service device. Such a modification of Hodes is clearly is improper. *See In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

Thus, for at least the reasons presented above, the rejection of claim 1 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claim 19.

Claims 2, 3, 20 and 21:

Regarding claim 2, Hodes in view of Hild fails to teach or suggest a client sending an advertisement request message for the service to the service device over the direct point-to-point communication link, contrary to the Examiner's assertion. The Examiner cites section 3.3 of Hodes. However, as described above regarding claim 1, Hodes system does not include a client sending an advertisement request message to a service device. Instead, as noted above, Hodes system includes service interaction proxies (SIPs) from which client may request and receive service information, including ISL documents, regarding services provided by controller objects, and not services provided by the SIPs themselves. Nowhere does Hodes mention anything about a client sending an advertisement request message to a service device, as suggested by the Examiner.

Additionally, the Examiner's contention that Hodes' SIP device can be considered the service device of Applicants' claim is incorrect, as noted above regarding claim 1. Since a client in Hodes' system does not request directly to a SIP device a document that describes an interface to access a service provided by the SIP device, Hodes' SIP device cannot be considered the service device of Applicants' claims.

Hild is not relied upon by the Examiner for the rejection of claim 2, and Hild fails to overcome the above noted deficiency of Hodes. In fact, Hild teaches away from a client sending an advertisement request message to a service device. Instead, Hild

teaches that every device periodically broadcasts service information both for services it provides as well as for services provided by other devices it knows about (Hild, column 4, line 56-column 5, line 12; column 8, line 65 – column 9, line 12). Thus, the Examiner's proposed combination of Hodes in view of Hild clearly fails to teach or suggest a client sending an advertisement request message for the service to the service device.

Moreover, the Examiner's proposed combination is improper since, as noted above, Hild teaches away from a client sending an advertisement request message.

Neither Hodes nor Hild, either singly or in any combination, teaches or suggests a client sending an advertisement request message for a service to the service device. Thus, for at least the reasons above, the rejection of claim 2 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claim 20.

Claims 7, 8, 25 and 26:

In regard to claim 7, Hodes in view of Hild fails to teach or suggest receiving the document in an advertisement request response message sent from the service over the direct point-to-point communication link, where the advertisement response message is in a data representation language. The Examiner cites section 3.7.2 of Hodes. However, as noted above, Hodes' system includes service interaction proxies (SIPs) from which client may request and receive service information, including ISL documents, regarding services provided by controller objects, and not services provided by the SIPs themselves. Thus, in Hodes' system a client will not receive and ISL document, which the Examiner equates to the document of Appellants' claims, in an advertisement request response message (or any other message) sent from the service over the direct point-to-point communication link.

Hodes specifically teaches the benefits of using SIPs to aggregate and distribute ISL documents. Thus, Hodes teaches away from receiving the document in an

advertisement request response message sent from the service over the direct point-topoint communication link.

Thus, for at least the reasons above, the rejection of claim 7 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claim 25.

Claims 12 and 30:

In regards to claim 12, Hodes in view of Hild fails to teach or suggest a client device configured to include a client security credential in a request to the service device for the document and where the service device is configured to authenticate the client security credential before sending the document to the client. The Examiner cites section 3.7.4 of Hodes. However, the cited passage of Hodes does not mention anything about a client device including a client security credential in a request to the service device for a document. Nor does the cited passage teach anything regarding the service device authenticating the client security credential before sending the document to the client. Instead, Hodes teaches, at section 3.7.4, the use of a sandboxed environment, such as used with Java applets, Safe-Tec, or Janus. Hodes also teaches that a proxy-based access model segments the security domain, "thereby screening more of the system internals from the user." The Examiner is apparently rejection claim 12 because Hodes describes some form of security (i.e. the use of a sandboxed environment). However, Hodes' security model does not disclose or suggest the specific limitations of Appellants' claim.

Hild is not relied on by the Examiner in the rejection of claim 12 and fails to overcome the above-noted deficiencies of Hodes. In fact, Hodes, whether considered singly or in combination with Hild, fails to teach or suggest anything about including a client security credential in a request to a service device for the document or about the service device authenticating the client security credential before sending the document

to the client. Thus, the rejection of claim 12 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claim 30.

Claims 13, 14, 31 and 32:

Regarding claim 13, Hodes in view of Hild fails to teach or suggest a client on the client device requesting a security credential from an authentication service specified in the document. The Examiner cites section 3.6 of Hodes. Hodes teaches that to ensure scoped access control, Hodes mobility beacons (or base stations) broadcast tickets consisting of random fixed-length bit vectors and Hodes' system requires that the current ticket be included in all communications to servers. Hodes teaches that the use of these tickets ensures local access control, such as by preventing someone across the control from turning off the local controllable lights. However, since the mobility beacons broadcast the tickets, Hodes clearly fails to teach or suggest a client device requesting a security credential. Additionally, Hodes fails to mention anything about a client requesting a security credential from an authentication service specified in the document. Hild is not relied on by the Examiner in the rejection of claim 13 and Hild fails mention anything about a client device requesting a security credential from an authentication service specified in the document, thus failing to overcome the abovenoted deficiencies of Hodes. Thus, whether considered separately or in combination, Hodes and Hild fail to teach or suggest the limitations of claim 13.

Moreover, by broadcasting the tickets, **Hodes teaches away** from a client device requesting a security credential from an authenticated service specified in the document.

Thus, the rejection of claim 13 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claim 31.

Claims 15 and 33:

In regards to claim 15 and contrary to the Examiner contention, Hodes in view of Hild fails to teach or suggest where the authentication service is provided by the service device. Specifically, claim 15 requires that the service device provide the authentication service specified in the document and from which a client on the client device requests a security credential. The Examiner cites section 3.6 of Hodes. As noted above regarding claim 13, Hodes teaches the use of tickets (e.g. random fixed-length bit vectors) to ensure local access control. However, Hodes specifically teaches that the mobility beacons (or base stations) broadcast the current ticket periodically. The service device in Hodes does not provide any sort of authentication service and clearly fails to provide an authentication service from which a client requests a security credential. Even if Hodes' tickets were considered security credentials, the service devices of Hodes do not provide the authentication service from which clients request the tickets. Thus, Hodes fails to teach or suggest the subject matter on which the Examiner relies.

Hild also fail to mention anything about a service device providing the authentication service and thus, Hodes, whether considered singly or in combination with Hild, fails to teach or suggest the limitations of claim 15.

Claim 37:

Regarding claim 37, Hodes in view of Hild clearly fails to teach or suggest a client device including an interface configure to directly request over the point-to-point communication link a document that describes an interface to access a service and receive the document directly from the service over the point-to-point communication link. The Examiner relies on the rejection of claim 1, citing section 3.3 of Hodes. However, as explained above regarding claim 1, the Examiner's reliance on Hodes is misplaced. Hodes teaches a system allowing users with mobile clients to discover, access and control devices. Hodes system does not involve a client directly requesting over a point-to-point communication link with a service device a document describing an interface to access a service and receiving the document directly from the service over the point-to-point communication link. Instead, Hodes teaches the use of

service interaction proxies (SIPs) that "run at domain-specific granularities and aggregate a group of services with a single set of advertisements" (Hodes, section 3.1, paragraph 2). Hence, instead of clients requesting interface documents directly from service devices, Hodes specifically teaches that SIPs aggregate service information for multiple service devices, such as all the controllable lights in a room (see, Hodes, section 2.2.1).

Hodes' service interaction proxy (SIP) device cannot be considered the service device of Appellants' claims because Hodes' SIP is not a service device from which a document is requested that describes an interface to access a service and receiving the document directly from the service over the point-to-point communication link. Instead, as noted above, clients in Hodes' system receive aggregated service advertisements from SIP devices that include interface descriptions for accessing and controlling services that are provided by devices other than the SIP device (such as controllable light switches). Thus, by requiring the use of a proxy SIP, Hodes actually teaches away from a client directly requesting to the service device a document that describes an interface to access the service and receiving the document directly from the service over the point-to-point communication link.

The Examiner also cites section 3.7.2 where Hodes describes his Interface Specification Language (ISL). However, nowhere does Hodes mention that a client device receives directly from a service an ISL describing an interface to access the service. Instead, as described above, Hodes teaches the use of SIPs that aggregate and distribute service information for multiple controllable objects. Thus, a client in Hodes' system would not receive a service information document directly from the service. Instead, a client in Hodes' system would request and receive an ISL from a local SIP device, which is not the device that provides the service.

The Examiner responds, in the Response to Arguments, by asserting, "the claim language merely states that the client requests a service directly from the service device" and that "[t]here is no limitation which states that the service is on the service device." However, claim 37 recites, in part, a client device including "a port configured to form a

directly point-to-point communication link with a service device; an interface configured to directly request over the point-to-point communication link a document that describes an interface to access a service; wherein the interface is further configured to receive said document directly from the service over the point-to-point communication link." Thus, the client device of claim 37 forms a direct point-to-point communication link with a service device, and over that direct point-to-point communication link (e.g. to the service device), requests a document that describes an interface to access a service and receives the document directly from the service over the point-to-point communication link. In other words, the client device receives from a service a document describing an interface to access that service over a direct point-to-point communication link with the service device. From the plain wording of claim 37, it is clear that the service resides on the service device (i.e. in order to use the direct point-to-point communication with the client device).

The Examiner also states, "[t]he SIP reads on the service device because it is in fact a device that provides services" and "[t]he SIP provides interface specifications to the client which are considered document[s] describing an interface." However, as discussed above, Hodes' clients do not form a direct point-to-point communication link with the SIP and do **not** request from the SIP a document that describes an interface to access a service and receive the document directly from the service over the direct point-to-point communication link. Thus, Hodes' SIP cannot be considered the service device of Appellants' claim.

Furthermore, Hodes in view of Hild clearly fails to teach or suggest the client device forming a direct point-to-point communication link with the service device. The Examiner admits that Hodes fails to teach a method for accessing a service using a direct point-to-point link and relies upon Hild, citing column 8, lines 9-20. However, the cited portion of Hild merely describes the various types of network topologies with which Hild's system is compatible. Moreover, the cited passage describes that Hild's system is "independent of the network topology and may be used on any kind of network topology allowing broadcast" (Hild, column 8, lines 15-18). The brief mention of a point-to-point

connection as part of a possible network topology in Hild does not teach or suggest a client actually forming a direct point-to-point communication link with a service device or the client using such a direct point-to-point link for requesting and receiving a document describing an interface to access a service provided by the service device.

As for actual device connections, Hild teaches a system in which all service devices periodically broadcast information regarding services that each particular device is aware of, regardless of whether those services are provided by the sending device or other devices of which the sending device is aware. Hild specifically teaches that each device includes services information provided by other devices as well as its own when broadcasting service announcements. Hild's system includes periodic broadcasts and Hild does not describe anything about a client device directly requesting a document describing an interface to access a service. Moreover, Hild does not teach anything about a client requesting anything. The Examiner has not cited any portion of Hild that mentions anything about a client device sending any sort of request. Instead, every device in Hild's system listens for a certain amount of time and if, by that time, it has not received a service announcement that includes its own service information it will send out a service announcement including its own service information as well as information regarding all other services of which it is aware (Hild, column 4, line 56-column 5, line 12; column 8, line 65 – column 9, line 12).

In the Response to Arguments, the Examiner states, "Hild shows that a point-to-point connection is an obvious way to access a wireless system." The Examiner has misunderstood Appellants argument. Appellants' have not made any argument regarding the general obviousness of using a point-to-point connection to access a wireless system in general. As stated above, Appellants hold that the Examiner's combination of Hodes in view of Hild does not teach or suggest the specific limitations of Appellants' claim. For example, as noted above, neither Hodes nor Hild, whether taken singly or in combination, teach or suggest a client device including a port configured to form a direct point-to-point communication link with a service device and an interface configured to directly request over the point-to-point communication link a document that describes an

interface to access a service and receive the document directly from the service over the point-to-point communication link. As explained above, Hild mentions point-to-point communications in two places, both in a very general manner. At column 2, lines 26-31, Hild states:

Even household devices, such as CD players, televisions and toasters, could identify and adapt to individual preferences and tastes using PAN technology. The PAN networks are usually point to point where the human body serves as a broadcast communications medium.

This reference by Hild to point-to-point communication bears absolutely no relevance to either Hodes or to Appellants' claim. The other reference to point-to-point communications by Hild states: "The present scheme can be used in local networks with point-to-point and/or point-to-multi-point connections" (Hild, column 8, lines 9-11). Thus, as Appellants noted above, Hild fails to teach or suggest anything specific about a client forming a direct point-to-point communication link with a service device. The extremely general statements by Hild regarding point-to-point communications, even when combined with Hodes, do not teach or suggest the specific limitations of Appellants' claims, as discussed below in more detail.

Even when combined as suggested by the Examiner, Hodes in view of Hild, fails to teach or suggest a client device including a port configured to form a direct point-to-point communication link with a service device and an interface configured to directly request over the point-to-point communication link a document that describes an interface to access a service and receive the document directly from the service over the point-to-point communication link. Instead, as noted above, Hodes teaches that a client will access a SIP device to request an interface document describing how to access services provided by other controllable objects. Hild teaches that devices periodically broadcast their service information as well as service information regarding other services provided by other devices. Thus, even when combined as suggested by the Examiner, Hodes in view of Hild does not teach or suggest an interface of a client device configured to directly request to a service device a document that describes an interface

to access a service and receive the document directly from the service over the direct point-to-point communication link.

In fact, both references <u>teach away</u> from a client device forming a direct point-to-point communication link with a service device to request a document describing an interface to access a service and to receive the document directly from the service. As discussed above, Hodes requires the use of an SIP proxy, as opposed to a direct point-to-point communication link. And the devices in Hild listen to broadcast communications as opposed to making requests over a direct point-to-point communication link.

In the Response to Arguments the Examiner states, "[t]he use of a point-to-point connection to access a wireless device is not a novel concept." As noted above, Appellants have never made any argument regarding the novelty of simply using a point-to-point connection to access a wireless device. Instead, Appellants are arguing that the teachings of Hodes and Hild, whether taken singly or in combination, do not teach or suggest the specific limitations of Appellants' claim 1. The Examiner appears to be attempting to reject Appellants claim in view of his general contention that "use of a point-to-point connection to access a wireless device is not a novel concept", which is clearly improper. The Examiner has failed to provide or cite any prior art that teaches or suggest the specific limitations as recited in Appellants' claim.

Furthermore, as described above regarding claim 1, the Examiner has failed to provide a proper motivation for modifying Hodes' system to incorporate the Examiner's selected teachings from Hild. The Examiner merely states that it would have been obvious to combine "the teachings of Hode[s] regarding the discovery of interfaces for accessing a service with the teachings of Hild regarding accessing a service via a direct point-to-point link because a point-to-point link would be a common way of accessing a service interaction proxy such as the one taught by Hode[s]." However, merely because a direct point-to-point links may be "a common way of accessing" devices in some contexts, does not provide any motivation to modify the specific system of Hodes away

from the use of SIPs providing aggregated service information to clients. Merely stating that individual aspects of a claimed invention are well known does not render the combination well known without some objective reason to combine the individual teachings. Ex parte Levengood, 28 USPQ2d 1300. The Examiner's statement that a point-to-point link would be a common way of accessing Hodes' SIP device does not change the fact that in Hodes a client does not request a document from a SIP device that describes an interface to access a service provided by the SIP, as would be required for the Examiner's line of reasoning to be correct.

Additionally, Hodes specifically teaches that SIPs provide aggregated service information for other service devices instead of service information being directly requested from service devices themselves. Modifying Hodes so that clients directly request service information from the service devices themselves via a direct point-to-point link with the service device would clearly change the principle of operation of Hodes' system. As noted at M.P.E.P. § 2143.02, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." Such is the case here. The Examiner proposes changing one of the basic principles of Hodes system of using a proxy instead of a direct point-to-point communication link to the service device. Such a modification of Hodes is clearly is improper. See In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

Claim 38:

Regarding claim 38, Hodes in view of Hild clearly fails to teach or suggest a service device including an interface configured to receive over the point-to-point communication link a request from a client for a document that describes an interface to access the service, where the interface is also configured to provide the document directly to the client over the point-to-point communication link and a service link configured to be accessed by the client according to the information specified in the document. The Examiner again relies on the rejection of claim 1 citing

section 3.3 of Hodes. However, the Examiner's reliance on Hodes is misplaced. Hodes teaches a system allowing users with mobile clients to discover, access and control devices. Hodes system does not involve an interface of a service device receiving over a point-to-point communication link a request from a client for a document describing an interface to access the service, where the service device also includes a service unit configured to be accessed by the client according to information specified in the document. Instead, Hodes teaches the use of service interaction proxies (SIPs) that "run at domain-specific granularities and aggregate a group of services with a single set of advertisements" (Hodes, section 3.1, paragraph 2). Hence, instead of clients requesting interface documents directly from service devices, Hodes specifically teaches that SIPs aggregate service information for multiple service devices, such as all the controllable lights in a room (see, Hodes, section 2.2.1).

Hodes' service interaction proxy (SIP) device cannot be considered the service device of Appellants' claims because Hodes' SIP is not a service device from which a document is requested that describes an interface to access a service unit of the service device. In other words, Hodes does not describe a client directly requesting a document describing an interface for accessing a service unit of the SIP, which would be required for the Examiner's interpretation to be correct. Instead, as noted above, clients in Hodes' system receive aggregated service advertisements from SIP devices that include interface descriptions for accessing and controlling services that are provided by devices other than the SIP device (such as controllable light switches). Thus, by requiring the use of a proxy SIP, Hodes actually teaches away from the specific limitations of claim 38.

The Examiner also citing section 3.7.2 where Hodes describes his Interface Specification Language (ISL). Hodes teaches the use of SIPs that aggregate and distribute service information for multiple controllable objects. Thus, a client in Hodes' system would not receive a service information document <u>directly</u> from the service device where the document describes an interface to access a service unit of the service device. Instead, a client in Hodes' system would request and receive an ISL from a local SIP device, which is not the device that provides the service.

The Examiner responds, in the Response to Arguments, by asserting, "the claim language merely states that the client requests a service directly from the service device" and that "[t]here is no limitation which states that the service is on the service device." However, claim 38 recites, in part, a service device including "an interface configured to receive over the point-to-point communication link a request from a client for a document that describes an interface to access the service" and "to provide said document directly to the client over the point-to-point communication link", where the service device also includes "a service unit configured to be accessed by the client according to information specified in the document." Thus, in contrast to the Examiner's statement, there is a specific limitation that the service is provided by the service device. The Examiner also states, "[t]he SIP reads on the service device because it is in fact a device that provides services" and "[t]he SIP provides interface specifications to the client which are considered document[s] describing an interface." However, as discussed above, Hodes' clients do not request from the SIP a document that describes an interface to access a service provided by the SIP. Additionally, the interface specifications provided by Hodes' SIP do not describe interfaces to access a service provided by the service device, as required by Appellants' claim. Thus, Hodes' SIP cannot be considered the service device of Appellants' claim.

Furthermore, Hodes in view of Hild clearly fails to teach or suggest the client device forming a direct point-to-point communication link with the service device. The Examiner admits that Hodes fails to teach a method for accessing a service using a direct point-to-point link and relies upon Hild, citing column 8, lines 9-20. However, as described above regarding claims 1 and 37, the cited portion of Hild merely describes the various types of network topologies with which Hild's system is compatible. Moreover, the cited passage describes that Hild's system is "independent of the network topology and may be used on any kind of network topology allowing broadcast" (Hild, column 8, lines 15-18). Please see the arguments above regarding claims 1 and 37 for a detailed discussion regarding Hild failing to teach or suggest a client actually forming a direct point-to-point communication link with a service device or the client using such a direct

point-to-point link for requesting and receiving a document describing an interface to access a service provided by the service device.

In the Response to Arguments, the Examiner states, "Hild shows that a point-to-point connection is an obvious way to access a wireless system." The Examiner has misunderstood Appellants argument. As described above regarding claim 1 and 37, Appellants' have not made any argument regarding the general obviousness of using a point-to-point connection to access a wireless system in general. As stated above, Appellants hold that the Examiner's combination of Hodes in view of Hild does not teach or suggest the specific limitations of Appellants' claim. For example, as noted above, neither Hodes nor Hild, whether taken singly or in combination, teach or suggest a client device forming a direct point-to-point communication link with a service device and directly requesting to the service device a document that describes an interface to access a service provided by the service device. As explained above, Hild mentions point-to-point communications in two places, both in a very general manner. At column 2, lines 26-31, Hild states:

Even household devices, such as CD players, televisions and toasters, could identify and adapt to individual preferences and tastes using PAN technology. The PAN networks are usually point to point where the human body serves as a broadcast communications medium.

This reference by Hild to point-to-point communication bears absolutely no relevance to either Hodes or to Appellants' claim. The other reference to point-to-point communications by Hild states: "The present scheme can be used in local networks with point-to-point and/or point-to-multi-point connections" (Hild, column 8, lines 9-11). Thus, as Appellants noted above, Hild fails to teach or suggest anything specific about a client forming a direct point-to-point communication link with a service device. The extremely general statements by Hild regarding point-to-point communications, even when combined with Hodes, do not teach or suggest the specific limitations of Appellants' claims, as discussed below in more detail.

Even when combined as suggested by the Examiner, Hodes in view of Hild, fails to teach or suggest an interface of a service device configured to receive over a point-to-point communication link a request from a client device that describes an interface to the service, where the interface is configured to provide the document directly to the client over the point-to-point communication link and a service unit of the service device configured to be accessed by the client according to information specified in the document. Instead, as noted above, Hodes teaches that a client will access a SIP device to request an interface document describing how to access services provided by other controllable objects. Hild teaches that devices periodically broadcast their service information as well as service information regarding other services provided by other devices. Thus, even when combined as suggested by the Examiner, Hodes in view of Hild does not teach or suggest a service device forming a direct point-to-point communication link with a client device, receiving over the point-to-point communication link a request from a client for a document describing an interface to access the service, where the interface it also configured to provide the document directly to the client over the point-to-point communication link, where the service device also includes a service unit configured to be accessed by the client according to information specified in the document.

In fact, both references <u>teach away</u> from a service device forming a direct point-to-point communication link with a client device. As discussed above, Hodes requires the use of an SIP proxy, as opposed to a direct point-to-point communication link. And the devices in Hild listen to broadcast communications as opposed to making requests over a direct point-to-point communication link.

In the Response to Arguments the Examiner states, "[t]he use of a point-to-point connection to access a wireless device is not a novel concept." As noted above, Appellants have never made any argument regarding the novelty of simply using a point-to-point connection to access a wireless device. Instead, Appellants are arguing that the teachings of Hodes and Hild, whether taken singly or in combination, do not teach or suggest the specific limitations of Appellants' claim 1. The Examiner appears to be

attempting to reject Appellants claim in view of his general contention that "use of a point-to-point connection to access a wireless device is not a novel concept", which is clearly improper. The Examiner has failed to provide or cite any prior art that teaches or suggest the specific limitations as recited in Appellants' claim.

Furthermore, as described above regarding claims 1 and 37, the Examiner has failed to provide a proper motivation for modifying Hodes' system to incorporate the Examiner's selected teachings from Hild. Please refer to the arguments above regarding claims 1 and 37 for a more detailed discussion regarding the Examiner's failure to provide a proper motivation for modifying Hodes in view of Hild.

Additionally, Hodes specifically teaches that SIPs provide aggregated service information for other service devices instead of service information being directly requested from service devices themselves. Modifying Hodes so that clients directly request service information from the service devices themselves via a direct point-to-point link with the service device would clearly change the principle of operation of Hodes' system. As noted at M.P.E.P. § 2143.02, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." Such is the case here. The Examiner proposes changing one of the basic principles of Hodes system of using a proxy instead of a direct point-to-point communication link to the service device. Such a modification of Hodes is clearly is improper. See In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

Claims 39, 42, 43, 44, 47 and 49:

Regarding claim 39, Hodes in view of Hild clearly fails to teach or suggest a client device directly requesting to the service device a document that describes an interface to access a service provided by the service device. The Examiner relies on the rejection of claim 1 and cites section 3.3 of Hodes. However, the Examiner's reliance on Hodes is misplaced. As described above, Hodes teaches a system allowing users with

mobile clients to discover, access and control devices. Hodes system does not involve a client directly requesting to a service device a document describing an interface to access a service provided by the service device. Instead, Hodes teaches the use of service interaction proxies (SIPs) that "run at domain-specific granularities and aggregate a group of services with a single set of advertisements" (Hodes, section 3.1, paragraph 2). Hence, instead of clients requesting interface documents directly from service devices, Hodes specifically teaches that SIPs aggregate service information for multiple service devices, such as all the controllable lights in a room (see, Hodes, section 2.2.1).

Hodes' service interaction proxy (SIP) device cannot be considered the service device of Appellants' claims because Hodes' SIP is not a service device from which a document is requested that describes an interface to access a service provided by the service device. In other words, Hodes does not describe a client directly requesting a document describing an interface for accessing a service provided by a SIP, which would be required for the Examiner's interpretation to be correct. Instead, as noted above, clients in Hodes' system receive aggregated service advertisements from SIP devices that include interface descriptions for accessing and controlling services that are provided by devices other than the SIP device (such as controllable light switches). Thus, by requiring the use of a proxy SIP, Hodes actually teaches away from a client directly requesting to the service device a document that describes an interface to access the service provided by the service device.

Additionally, Hodes in view of Hild fails to teach or suggest receiving the document directly from the service device, wherein the document comprises information describing how to access the service. The Examiner again relies on Hodes, citing section 3.7.2 where Hodes describes his Interface Specification Language (ISL). However, nowhere does Hodes mention that a client device receives an ISL directly from a service device. Instead, as described above, Hodes teaches the use of SIPs that aggregate and distribute service information for multiple controllable objects. Thus, a client in Hodes' system would not receive a service information document directly from

the service device. Instead, a client in Hodes' system would request and receive an ISL from a local SIP device, which is not the device that provides the service.

The Examiner responds, in the Response to Arguments, by asserting, "the claim language merely states that the client requests a service directly from the service device" and that "[t]here is no limitation which states that the service is on the service device." However, as with claim 1, claim 39 recites, in part, "directly requesting to the service device a document that describes an interface to access a service provided by the service device." Thus, in contrast to the Examiner's statement, there is a specific limitation that the service is provided by the service device. The Examiner also states, "[t]he SIP reads on the service device because it is in fact a device that provides services" and "[t]he SIP provides interface specifications to the client which are considered document[s] describing an interface." However, as discussed above, Hodes' clients do not request from the SIP a document that describes an interface to access a service provided by the SIP. Additionally, the interface specifications provided by Hodes' SIP do not describe interfaces to access any service provided by the service device, as required by Appellants' claim. Thus, Hodes' SIP cannot be considered the service device of Appellants' claim.

Furthermore, Hodes in view of Hild clearly fails to teach or suggest the client device forming a direct point-to-point communication link with the service device. The Examiner admits that Hodes fails to teach a method for accessing a service using a direct point-to-point link and relies upon Hild, citing column 8, lines 9-20. However, the cited portion of Hild merely describes the various types of network topologies with which Hild's system is compatible. Moreover, the cited passage describes that Hild's system is "independent of the network topology and may be used on any kind of network topology allowing broadcast" (Hild, column 8, lines 15-18). The brief mention of a point-to-point connection as part of a possible network topology in Hild does not teach or suggest a client actually forming a direct point-to-point communication link with a service device or the client using such a direct point-to-point link for requesting and receiving a document describing an interface to access a service provided by the service device.

As for actual device connections, Hild teaches a system in which all service devices periodically broadcast information regarding services that each particular device is aware of, regardless of whether those services are provided by the sending device or other devices of which the sending device is aware. Hild specifically teaches that each device includes services information provided by other devices as well as its own when broadcasting service announcements. Hild's system includes periodic broadcasts and Hild does not describe anything about a client device directly requesting a document describing an interface to access a service. Moreover, Hild does not teach anything about a client requesting anything. The Examiner has not cited any portion of Hild that mentions anything about a client device sending any sort of request. Instead, every device in Hild's system listens for a certain amount of time and if, by that time, it has not received a service announcement that includes its own service information it will send out a service announcement including its own service information as well as information regarding all other services of which it is aware (Hild, column 4, line 56-column 5, line 12; column 8, line 65 – column 9, line 12).

In the Response to Arguments, the Examiner states, "Hild shows that a point-to-point connection is an obvious way to access a wireless system." The Examiner has misunderstood Appellants argument. Appellants' have not made any argument regarding the general obviousness of using a point-to-point connection to access a wireless system in general. As stated above, Appellants hold that the Examiner's combination of Hodes in view of Hild does not teach or suggest the specific limitations of Appellants' claim. Please see the arguments above regarding claims 1, 37 and 38 for a detailed discussion regarding how neither Hodes nor Hild, whether taken singly or in combination, teach or suggest a client device forming a direct point-to-point communication link with a service device and directly requesting to the service device a document that describes an interface to access a service provided by the service device.

Even when combined as suggested by the Examiner, Hodes in view of Hild, fails to teach or suggest a client device directly requesting to a service device a

device; and the client device receiving the document directly from the service device, wherein the document includes information describing how to access a service provided by the service device. Instead, as noted above, Hodes teaches that a client will access a SIP device to request an interface document describing how to access services provided by other controllable objects. Hild teaches that devices periodically broadcast their service information as well as service information regarding other services provided by other devices. Thus, even when combined as suggested by the Examiner, Hodes in view of Hild does not teach or suggest a client device directly requesting to a service device a document that describes an interface to access a service provided by the service device; and the client device receiving the document directly from the service device, wherein the document includes information describing how to access the service.

In fact, both references <u>teach away</u> from a client device forming a direct point-to-point communication link with a service device. As discussed above, Hodes requires the use of an SIP proxy, as opposed to a direct point-to-point communication link. And the devices in Hild listen to broadcast communications as opposed to making requests over a direct point-to-point communication link.

In the Response to Arguments the Examiner states, "[t]he use of a point-to-point connection to access a wireless device is not a novel concept." As noted above, Appellants have never made any argument regarding the novelty of simply using a point-to-point connection to access a wireless device. Instead, Appellants are arguing that the teachings of Hodes and Hild, whether taken singly or in combination, do not teach or suggest the specific limitations of Appellants' claim 1. The Examiner appears to be attempting to reject Appellants claim in view of his general contention that "use of a point-to-point connection to access a wireless device is not a novel concept", which is clearly improper. The Examiner has failed to provide or cite any prior art that teaches or suggest the specific limitations as recited in Appellants' claim.

Furthermore, the Examiner has failed to provide a proper motivation for modifying Hodes' system to incorporate the Examiner's selected teachings from Hild. Please refer to the arguments above regarding claim 1, 37 and 39 for a detailed discussion regarding the lack of motivation to modify Hodes in view of Hild.

Additionally, Hodes specifically teaches that SIPs provide aggregated service information for other service devices instead of service information being directly requested from service devices themselves. Modifying Hodes so that clients directly request service information from the service devices themselves via a direct point-to-point link with the service device would clearly change the principle of operation of Hodes' system. As noted at M.P.E.P. § 2143.02, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." Such is the case here. The Examiner proposes changing one of the basic principles of Hodes system of using a proxy instead of a direct point-to-point communication link to the service device. Such a modification of Hodes is clearly is improper. See In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

Claims 40 and 41:

Regarding claim 40, Hodes in view of Hild fails to teach or suggest a client sending an advertisement request message for the service to the service device over the direct point-to-point communication link, contrary to the Examiner's assertion. The Examiner cites section 3.3 of Hodes. However, as described above regarding claim 39, Hodes system does not include a client sending an advertisement request message to a service device. Instead, as noted above, Hodes system includes service interaction proxies (SIPs) from which client may request and receive service information, including ISL documents, regarding services provided by controller objects, and not services provided by the SIPs themselves. Nowhere does Hodes mention anything about a client sending an advertisement request message to a service device, as suggested by the Examiner.

Additionally, the Examiner's contention that Hodes' SIP device can be considered the service device of Applicants' claim is incorrect, as noted above regarding claim 1. Since a client in Hodes' system does not request to a SIP device a document that describes an interface to access a service provided by the SIP device, Hodes' SIP device cannot be considered the service device of Applicants' claims.

Hild is not relied upon by the Examiner for the rejection of claim 40, and Hild fails to overcome the above noted deficiency of Hodes. In fact, Hild **teaches away** from a client sending an advertisement request message to a service device. Instead, Hild teaches that every device periodically broadcasts service information both for services it provides as well as for services provided by other devices it knows about (Hild, column 4, line 56-column 5, line 12; column 8, line 65 – column 9, line 12). Thus, the Examiner's proposed combination of Hodes in view of Hild clearly fails to teach or suggest a client sending an advertisement request message for the service to the service device. Also, the Examiner's proposed combination is improper since Hild teaches away from a client sending an advertisement request message.

Neither Hodes nor Hild, either singly or in any combination, teaches or suggests a client sending an advertisement request message for a service to the service device. Thus, for at least the reasons above, the rejection of claim 40 is not supported by the cited art and removal thereof is respectfully requested.

Claim 45 and 46:

In regard to claim 45, Hodes in view of Hild fails to teach or suggest receiving the document in an advertisement request response message sent from the service over the direct point-to-point communication link, where the advertisement response message is in a data representation language. The Examiner cites section 3.7.2 of Hodes. However, as noted above, Hodes' system includes service interaction proxies (SIPs) from which client may request and receive service information, including

ISL documents, regarding services provided by controller objects, and not services provided by the SIPs themselves. Thus, in Hodes' system a client will not receive and ISL document, which the Examiner equates to the document of Appellants' claims, in an advertisement request response message (or any other message) sent from the service over the direct point-to-point communication link.

Hodes specifically teaches the benefits of using SIPs to aggregate and distribute ISL documents. Thus, **Hodes teaches away** from receiving the document in an advertisement request response message sent from the service over the direct point-to-point communication link.

Thus, for at least the reasons above, the rejection of claim 45 is not supported by the cited art and removal thereof is respectfully requested.

Claim 50:

In regards to claim 50, Hodes in view of Hild fails to teach or suggest including a client security credential in a request to the service device for the document and where the service device authenticates the client security credential before sending the document to the client. The Examiner cites section 3.7.4 of Hodes. However, the cited passage of Hodes does not mention anything about a client device including a client security credential in a request to the service device for a document. Nor does the cited passage teach anything regarding the service device authenticating the client security credential before sending the document to the client. Instead, Hodes teaches, at section 3.7.4, the use of a sandboxed environment, such as used with Java applets, Safe-Tec, or Janus. Hodes also teaches that a proxy-based access model segments the security domain, "thereby screening more of the system internals from the user." The Examiner is apparently rejection claim 50 because Hodes describes some form of security (i.e. the use of a sandboxed environment). However, Hodes' security model does not disclose or suggest the specific limitations of Appellants' claim.

Hild is not relied on by the Examiner in the rejection of claim 50 and fails to overcome the above-noted deficiencies of Hodes. In fact, Hodes, whether considered singly or in combination with Hild, fails to teach or suggest anything about including a client security credential in a request to a service device for the document or about the service device authenticating the client security credential before sending the document to the client. Thus, the rejection of claim 50 is not supported by the cited art and removal thereof is respectfully requested.

Claim 51:

Regarding claim 51, Hodes in view of Hild fails to teach or suggest a client on the client device requesting a security credential from an authentication service specified in the document. The Examiner cites section 3.6 of Hodes. Hodes teaches that to ensure scoped access control, Hodes mobility beacons (or base stations) broadcast tickets consisting of random fixed-length bit vectors and Hodes' system requires that the current ticket be included in all communications to servers. However, since the mobility beacons broadcast the tickets, Hodes clearly fails to teach or suggest a client device requesting a security credential. Additionally, Hodes fails to mention anything about a client requesting a security credential from an authentication service specified in the document. Hild is not relied on by the Examiner in the rejection of claim 51 and Hild fails mention anything about a client device requesting a security credential from an authentication service specified in the document, thus failing to overcome the abovenoted deficiencies of Hodes. Thus, whether considered separately or in combination, Hodes and Hild fail to teach or suggest the limitations of claim 51. Moreover, by broadcasting the tickets, Hodes teaches away from a client device requesting a security credential from an authenticated service specified in the document. Thus, the rejection of claim 51 is not supported by the cited art and removal thereof is respectfully requested.

Second Ground of Rejection

Claims 10, 28, and 48 stand finally rejected under 35 U.S.C. § 103(a) as being

unpatentable over Hodes in view of Hild and in further view of Schuster (U.S. Patent 6,795,429). Appellants traverse this rejection for at least the reasons presented above regarding their respective, independent claims.

Third Ground of Rejection

Claims 16-18, 34-36 and 52-54 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hodes in view of Hild and further in view of Bell (U.S. Patent 6,405,027). Appellants traverse this rejection for at least the following reasons.

In regards to claim 16, Hodes in view of Hild and in view of Bell fails to teach or suggest the client device making said document available to other devices over the transport connection. The Examiner admits that Hodes and Hild fail to teach the limitations of claim 16. The Examiner cites column 2, lines 64 – column 3, lines 46 and asserts, "Bell teaches a client device acting as a bridge." However, claim 16 not recite "a client device acting as a bridge." Additionally, Bell, whether considered singly or in combination with Hodes and Hild, fails to mention anything regarding a client device making a document available to other devices of a transport connection. Instead, Bell teaches a communication device (e.g. a cell phone) configured to communicate over one wireless link and also configured to communicate with other devices over other wireless direct device-to-device links in order to carry on a group telephone call "by appropriately combining speech signals carried by the various links." Nothing described by Bell, even if considered in view of Hodes and Hild, teaches or suggests a client device making a document available to other devices over a transport connection.

Additionally, the combination of Hodes, Hild and Bell would not result in a system that includes a client device making a document available to other devices over a transport connection. Instead, the Examiner's combination of Hodes, Hild and Bell would result in the ad-hoc location-based services for mobile clients as taught by Hodes, including the periodic broadcasting of service advertisements as taught by Hild and also include the ability to make group conference calls using Bluetooth enabled cell phones as

taught by Bell.

Furthermore, the Examiner has failed to provide a proper motivation for combining the group calling system of Bell with Hodes and Hild. The Examiner states, "[i]t would have been obvious ... to combine the teachings of the Hode-Hild combination regarding wireless communications with the teachings of Bell regarding using wireless device as a bridge because such configurations are useful in conferencing situations." However, neither Hodes nor Hild are concerned with any sort of conferencing situations involving group calls as taught by Bell. One looking to improve conference calling would simply use Bell's invention. No one concerned with conferencing situations would be motivated to use Hodes mobile device controllers modified to include the group calling system of Bell.

Thus, the rejection of claim 13 is not supported by the cited art and removal thereof is respectfully requested. Similar remarks also apply to claims 34 and 52.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-54 was erroneous, and reversal of her decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of \$500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-72300/RCK. This Appeal Brief is timely filed within the one month period from the mailing date of the Notice of Panel Decision. Accordingly, no extension of time fee should be due. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,

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Date: August 2, 2006

VIII. CLAIMS APPENDIX

The claims on appeal are as follows.

- 1. A method for accessing a proximity service, comprising:
- a client device forming a direct point-to-point communication link with a service device;
- the client device directly requesting to the service device a document that describes an interface to access a service provided by the service device;
- the client device receiving said document directly from the service device, wherein said document comprises information describing how to access the service;
- wherein said requesting and said receiving are performed over said direct pointto-point communication link; and

the client device using the information from said document to access the service.

- 2. The method as recited in claim 1, wherein said requesting comprises the client sending an advertisement request message for the service to the service device over the direct point-to-point communication link, wherein the advertisement request message is in a data representation language.
- 3. The method as recited in claim 2, wherein the data representation language is eXtensible Markup Language (XML).
- 4. The method as recited in claim 1, wherein said document comprises a service advertisement for the service, wherein said service advertisement comprises a

schema specifying an interface to at least a portion the service.

- 5. The method as recited in claim 4, wherein said schema is an eXtensible Markup Language (XML) schema defining XML messages for a client on the client device to send to the service and the service to send to the client in order for the client to access capabilities of the service.
- 6. The method as recited in claim 5, wherein the client device using the information from said document comprises the client sending one or more of said XML messages to the service over said direct point-to-point communication link.
- 7. The method as recited in claim 1, wherein said receiving comprises receiving said document in an advertisement request response message sent from the service over said direct point-to-point communication link, wherein the advertisement request response message is in a data representation language.
- 8. The method as recited in claim 7, wherein the data representation language is eXtensible Markup Language (XML).
- 9. The method as recited in claim 1, wherein the client device is in physical proximity of the service device.
- 10. The method as recited in claim 1, wherein said direct point-to-point communication link is an IrDA infrared link.
- 11. The method as recited in claim 1, wherein the client device is in wireless proximity of the service device.
- 12. The method as recited in claim 1, wherein said requesting comprises including a client security credential in a request to said service device for said document, and wherein said service device authenticates said client security credential before

sending said document to the client device.

13. The method as recited in claim 1, wherein said client device using the information from said document to access the service comprises:

a client on the client device requesting a security credential from an authentication service specified in said document;

the client receiving said security credential; and

the client including said security credential with a subsequent request to the service to access a capability of the service.

- 14. The method as recited in claim 13, further comprising the service verifying the client's security credential before allowing access to the capability.
- 15. The method as recited in claim 14, wherein said authentication service is provided by the service device.
- 16. The method as recited in claim 1, wherein the client device supports a transport connection in addition to said direct point-to-point communication link, wherein said client device using the information from said document to access the service comprises the client device making said document available to other devices over said transport connection, wherein the client device provides a bridge from said transport connection to said direct point-to-point communication link so that the other devices may access the service.
- 17. The method as recited in claim 16, wherein said transport connection comprises a network connection.
 - 18. The method as recited in claim 17, wherein said network connection

comprises an Internet connection.

19. A system, comprising:

- a service device configured to support a direct point-to-point communication link and provide a service;
- a client device configured to form said direct point-to-point communication link with the service device;
- wherein the client device is further configured to directly request from the service device a document that describes an interface to access the service;
- wherein the service device is further configured to provide said document directly to the client device over said direct point-to-point communication link; and
- wherein the client device is further configured to use the information from said document to access the service.
- 20. The system as recited in claim 19, wherein the client device is configured to request said document by sending an advertisement request message for the service to the service device over the direct point-to-point communication link, wherein the advertisement request message is in a data representation language.
- 21. The system as recited in claim 20, wherein the data representation language is eXtensible Markup Language (XML).
- 22. The system as recited in claim 19, wherein said document comprises a service advertisement for the service, wherein said service advertisement comprises a schema specifying an interface to at least a portion the service.

- 23. The system as recited in claim 22, wherein said schema is an eXtensible Markup Language (XML) schema defining XML messages for a client on the client device to send to the service and the service to send to the client in order for the client to access capabilities of the service.
- 24. The system as recited in claim 23, wherein the client device is configured to use the information from said document to send one or more of said XML messages to the service over said direct point-to-point communication link.
- 25. The system as recited in claim 19, wherein the client device is configured to receive said document in an advertisement request response message sent from the service over said direct point-to-point communication link, wherein the advertisement request response message is in a data representation language.
- 26. The system as recited in claim 25, wherein the data representation language is eXtensible Markup Language (XML).
- 27. The system as recited in claim 19, wherein the client device is in physical proximity of the service device.
- 28. The system as recited in claim 19, wherein said direct point-to-point communication link is an IrDA infrared link.
- 29. The system as recited in claim 19, wherein the client device is in wireless proximity of the service device.
- 30. The system as recited in claim 19, wherein the client device is configured to include a client security credential in a request to said service device for said document, and wherein said service device is configured to authenticate said client security credential before sending said document to the client device.

31. The system as recited in claim 19, wherein said client device is configured to:

request a security credential from an authentication service specified in said document;

receive said security credential; and

include said security credential with a subsequent request to the service to access a capability of the service.

- 32. The system as recited in claim 32, wherein the service is configured to verify the client's security credential before allowing access to the capability.
- 33. The system as recited in claim 32, wherein said authentication service is provided by the service device.
- 34. The system as recited in claim 19, wherein the client device is configured to support a transport connection in addition to said direct point-to-point communication link, wherein said client device is further configured to make said document available to other devices over said transport connection and provide a bridge from said transport connection to said direct point-to-point communication link so that the other devices may access the service.
- 35. The system as recited in claim 34, wherein said transport connection comprises a network connection.
- 36. The system as recited in claim 35, wherein said network connection comprises an Internet connection.

- 37. A client device, comprising:
- a port configured to form a direct point-to-point communication link with a service device;
- an interface configured to directly request over the point-to-point communication link a document that describes an interface to access a service;
- wherein the interface is further configured to receive said document directly from the service over the point-to-point communication link; and
- wherein the interface is further configured to use the information from said document to access the service.
- 38. A service device, comprising:
- a port configured to form a direct point-to-point communication link with a client device;
- an interface configured to receive over the point-to-point communication link a request from a client for a document that describes an interface to access the service, wherein the interface is further configured to provide said document directly to the client over the point-to-point communication link; and
- a service unit configured to be accessed by the client according to information specified in said document.
- 39. A tangible, computer accessible medium comprising program instructions, wherein the program instructions are computer-executable on a client device to

implement:

forming a direct point-to-point communication link with a service device;

directly requesting to the service device a document that describes an interface to access a service provided by the service device;

receiving said document directly from the service device, wherein said document comprises information describing how to access the service;

wherein said requesting and said receiving are performed over said direct pointto-point communication link; and

using the information from said document to access the service.

- 40. The tangible, computer accessible medium as recited in claim 39, wherein said requesting comprises the client sending an advertisement request message for the service to the service device over the direct point-to-point communication link, wherein the advertisement request message is in a data representation language.
- 41. The tangible, computer accessible medium as recited in claim 40, wherein the data representation language is eXtensible Markup Language (XML).
- 42. The tangible, computer accessible medium as recited in claim 39, wherein said document comprises a service advertisement for the service, wherein said service advertisement comprises a schema specifying an interface to at least a portion the service.
- 43. The tangible, computer accessible medium as recited in claim 42, wherein said schema is an eXtensible Markup Language (XML) schema defining XML messages for a client on the client device to send to the service and the service to send to the client in order for the client to access capabilities of the service.

- 44. The tangible, computer accessible medium as recited in claim 43, wherein said using the information from said document comprises the client sending one or more of said XML messages to the service over said direct point-to-point communication link.
- 45. The tangible, computer accessible medium as recited in claim 39, wherein said receiving comprises receiving said document in an advertisement request response message sent from the service over said direct point-to-point communication link, wherein the advertisement request response message is in a data representation language.
- 46. The tangible, computer accessible medium as recited in claim 45, wherein the data representation language is eXtensible Markup Language (XML).
- 47. The tangible, computer accessible medium as recited in claim 39, wherein the client device is in physical proximity of the service device.
- 48. The tangible, computer accessible medium as recited in claim 39, wherein said direct point-to-point communication link is an IrDA infrared link.
- 49. The tangible, computer accessible medium as recited in claim 39, wherein the client device is in wireless proximity of the service device.
- 50. The tangible, computer accessible medium as recited in claim 39, wherein said requesting comprises including a client security credential in a request to said service device for said document, and wherein said service device authenticates said client security credential before sending said document to the client device.
- 51. The tangible, computer accessible medium as recited in claim 39, wherein said using the information from said document to access the service comprises:
 - a client on the client device requesting a security credential from an authentication service specified in said document;

the client receiving said security credential; and

the client including said security credential with a subsequent request to the service to access a capability of the service.

- 52. The tangible, computer accessible medium as recited in claim 39, wherein the client device supports a transport connection in addition to said direct point-to-point communication link, wherein said using the information from said document to access the service comprises making said document available to other devices over said transport connection providing a bridge from said transport connection to said direct point-to-point communication link so that the other devices may access the service.
- 53. The tangible, computer accessible medium as recited in claim 52, wherein said transport connection comprises a network connection.
- 54. The tangible, computer accessible medium as recited in claim 53, wherein said network connection comprises an Internet connection.

IX. EVIDENCE APPENDIX

No evidence submitted under 37 CFR §§ 1.130, 1.131 or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.